(a) subcloning a sequence encoding a full-length human coagulation factor VIII into a plant expression vector and obtaining a subcloned plant expression vector;

(b) transferring the subcloned plant expression vector into a plurality of plant cells;

(c) selecting a plurality of positive transformants from the plurality of plant cells on an antibiotic selective media;

(d) growing the plurality of plant cells in whole plants or suspensions; and

(e) extracting and purifying the human coagulation factor VIII from the plurality of plant cells.

6. (Amended) A method of producing an active human coagulation factor VIII from plant cells, comprising the steps of:

(a) introducing a sequence encoding human coagulation factor VIII for production of human coagulation factor VIII into a plant expression vector in the plant cells;

(b) obtaining a positive transformant of the plant cells, the positive transformant carrying genetic material encoding the human coagulation factor VIII;

(c) cultivating the positive transformant; and

(d) obtaining the human coagulation factor VIII.

(b) transferring the subcloned plant expression vector into a plurality of plant cells;

(c) selecting a plurality of positive transformants from the plurality of plant cells on an antibiotic selective media;

(d) growing the plurality of plant cells in whole plants or suspensions; and

(e) extracting and purifying the human coagulation factor VIII from the plurality of plant cells.

B cont'd

7. (Amended) The method as recited in claim 6, wherein said encoding sequence is a cDNA.

8. (Amended) The method as recited in claim 6, wherein factor VIII is cultivated in a whole plant.

B3

13. (Amended) The method as recited in claim 6, wherein said encoding sequence encodes a full length of said human coagulation factor VIII deleting a B-domain. canal

B4

15. (Amended) The method as recited in claim 6, wherein a sequence encoding A2 epitope of human coagulation factor VIII in said sequence is replaced with an analogous porcine sequence. canal if not full length? or if not domain Ann

B5

19. (Amended) The method as recited in claim 6, wherein said encoding sequence is provided by adding transcription promoter to the upstream of 5' end of the encoding sequence; and adding a transcription terminator to the downstream of 3' end of the encoding sequence.

20. (Amended) The method as recited in claim 19, further comprising adding a sequence encoding a signal peptide between the transcription promoter and the upstream 5' end of the encoding sequence.

sub B C5

23. (Amended) A method of producing an active human coagulation factor VIII using an agrobacterium mediated transformation, comprising: agrobacterium

B6

(a) modifying a coagulation factor VIII a sequence encoding human coagulation factor VIII for subcloning into a plant expression vector;

(b) subcloning the encoding sequence into the plant expression vector; agrobacterium

(c) transferring the plant expression vector to ~~agrobacterium~~;

(d) co-cultivating a portion of the transgenic plant cells with the agrobacterium; agrobacterium

(e) selecting positive transformants from the co-cultivated culture on an antibiotic selective media;

(f) permitting growth of transgenic plant cells in whole plants or suspensions; and

(g) extracting a quantity of human coagulation factor VIII from the plant cells.